The Quality of Information about Hip Fractures in Turkish Internet Sites

Türkçe Web Sitelerindeki Kalça Kırığı ile İlgili Bilgilerin Kalitesi

İnternetteki Sağlık Verilerinin Yeterliliği / Adequacy of Health Data on Internet

Fatih Küçükdurmaz, Hasan Hüseyin Ceylan, İbrahim Tuncay,
Bezmialem Vakıf Üniversitesi Tıp Fakültesi Hastanesi, Ortopedi ve Travmatoloji A.D. İstanbul, Türkiye

Özet

Amaç: İnternet bilgiye ulaşımda sıkça kullanılan bir yol haline gelmiştir. Hastalar ve yakınları hastalıklar ve tedavi yöntemleri konusunda sıkça internetten bilgi almaktadır. Çalışmamızda kalça kırığı konusunda bilgi sunan Türkçe dilinde hazırlanmış internet sitelerinin içeriğini değerlendirmeyi hedefledik.Gereç ve Yöntem: Türkiye'de en sık kullanılan üç internet arama motoru ile 'kalça kırığı' terimi yazılarak arama yapıldı. Arama sonucu bulunan ilk 10 site içerikleri açısından standart bir forma göre puanlandı. Bulgular: Arama sonucu ulaşılan 30 siteden sadece 9'u konu ile ilgili hastalara yönelik bilgi içermekteydi. Bu dokuz sitenin puanı 7.0 (min:2, maks.:14, SD:4.81) olarak belirlendi. Sonuç: Sağlık konusunda bilgi içeren Türkçe web sitelerinin içerik kalitesi yetersiz olarak bulundu. Bu durum kullanıcıların eksik ve yanlış bilgilenmesine, konu hakkında yanlış önyargılar edinmesine yol açabilir. Bu konuda objektif akreditasyon yapan sitelerin geliştirilmesine ihtiyaç vardır.

Anahtar Kelimeler

Kalça Kırığı; Halk Sağlığı Bilişimi; İnternet

Abstract

Aim: Internet has been the most commonly used way to access information now. Patients and their families search information about diseases and treatment methods on web. Our aim is to check the information quality of Turkish language based web sites that mention about hip fractures. Material and Method: We made a search by the word 'hip fracture' with three web search engines which are most popular in Turkey. We evaluated the most commonly visited first 10 sites and scored them according to a standard form. Results: Nine of the 30 web sites were include useful information for patients about the subject. The total score was 7.0 (min.:2, max.:14, SD: 4.81) Discussion: The web sites designed in Turkish that contains information about the health topics was found to be inadequate. This incomplete and incorrect information can lead to the users false informed about the topic. In this regard, the development of new sites is needed that can objectively accreditate health-related sites.

Keywords

Hip Fracture; Public Health Informatics; Internet

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Corresponding Author: Hasan Hüseyin Ceylan, Bezmialem Vakıf Üniversitesi Tıp Fakültesi, Ortopedi ve Travmatoloji A.D. Adnan Menderes Bulvarı Vatan Caddesi 34093 Fatih, İstanbul, Türkiye. T.: +90 2124531700 GSM: +905306966045 F.: +90 2125332326 E-Mail: drhhc@yahoo.com

Introduction

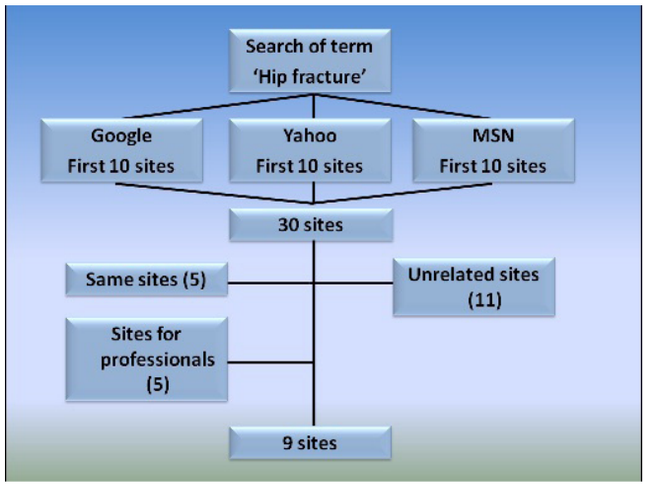
Nowadays, the Internet has become a source of information gaining more and more importance for patients and health professionals. According to the data gathered in 2009 by the Turkish Institute of Statistics, Internet access in households in our country is about 30%.[1] Nearly half of the Internet users in our country access information related to health via the web.[2] Similarly in the United States, the rate of seeking information about health on the Internet as of 2009 increased by 144% compared to 2000.[3] Moreover, about 64% of those who appeal to the Internet to get information about health issues change their decisions because of the data acquired via the Internet. These numbers strikingly demonstrate how important the Internet has become as a source of reference regarding health in the world and in Turkey.

Although the Internet has become an increasingly go-to source of information, it brings about the discussion whether the content of data acquired via this source is correct.[4] Some studies in the English literature indicate the quality of the content of the information rendered on the Internet regarding orthopedics and traumatology.[5-7] One of the significant issues of orthopedics and traumatology is hip fracture which has become more frequent.[8-10]

With the increasingly better standards of life in Turkey, life expectancy and therefore geriatric population is increasing.[8,9] People get information from the Internet which is now widely and easily accessible about issues concerning the geriatric population more such as hip fracture. In this study, by using standard methods we tried to evaluate the reliability of information provided in the Turkish Language on the Internet for patients about hip fracture.

Material and Method

The term "Kalça Kırığı" (means 'Hip Fracture' in English) was searched on the three search engines most commonly used in Turkey; Google, Yahoo and MSN. For each search, the first 10 sites in the search result list were identified; the same sites were eliminated. In addition, sites where the content was not related to the topic as well as those with academic contents addressed to professionals were also eliminated (Figure 1). The remaining sites were graded, based on the headings used by Greene et al.[11], according to their content of information (Table 1). It was checked whether the sites provided information under the sub-headings in an adapted version of the patient disclosure form prepared by AAOS (American Academy of Orthopedic Surgeons) shown in Table 1. In accordance with the standard form prepared beforehand, the sites were evaluated in a questionnaire of 25 total points, given 1 point for each topic they include and 0 point for an unmentioned topic.



Graphic 1. Evaluation of websites rendered by search engines with search keywords

Table 1. Headings of information used in the evaluation of information quality on websites

Headings of information	Subheadings		Score
Anatomy	Hip anatomy		1
	Osteoporosis		1
Causes	Pathological fractures		1
	Stress fracture		1
	Trauma		1
	Pain and localization		1
Findings	Deformity (shortening, external rotation)		1
	Unable to walk		1
	X-ray imaging		1
Imaging	MRI imaging		1
	CT imaging		1
Types of fracture	Types of fracture		1
	Type-surgery choice relation		1
	Preoperative examination		1
Treatment	Osteosynthesis (fixation)	Definition	1
		Types	1
		Complications	1
	Arthroplasty (Prosthesis alternatives)	Definition	1
		Types	1
		Complications	1
	Inoperability		1
Post-operative	Follow-up		1
	Rehabilitation-mobilization		1
	Thromboproflaxy		1
	Positioning		1
TOTAL			25

Results

When the term "Hip Fracture" is searched, Google rendered 227.000 results, Yahoo 42.000, and MSN 14.800. Among the results in each of the three search engines the first most frequently clicked 10 sites were copied with all their content. In total, 30 sites accessed with three different engines were examined. The 30 sites were broken down as such: the same sites appeared for all 3 engines (5 sites), which were unrelated to the topic (11 sites), and which were addressed to professionals with academic content (5 sites) were eliminated, 9 sites remained. As a result of content grading of these 9 sites with the standard form, the average point of the sites was calculated as 7.0 (min.:2, max.:14, SD: 4.81).

Discussion

With its easy accessibility by all, cheapness, and possibility to access information about any topic, information on the Internet

becomes more prominent than stationary sources of information. However, it is possible for anyone to be an information provider on the Internet. Because of the nature of the Internet, it is not possible to inspect and correct its whole content, either. This situation may lead to quite negative results for many people using the Internet to access information. Especially, as misleading information acquired about health may lead to wrong practices, this may lead to rather grave results. In the literature, even deaths have been reported as a result of patients' application of misleading information provided on the Internet about health issues.[12] It is of importance that before taking precautions about this current problem, the situation at hand should be determined.

The reasons why we choose hip fracture as our topic are: the increase in the frequency of incidents of hip fracture with the increase in average age and in life expectancy [8,9], presence of different surgical methods for the treatment to be carried out 10, its being an issue about which patients should be informed correctly and enough about the risks involved and the importance of post-operative rehabilitation.

In this study, in order to evaluate the quality of information regarding hip fracture, the grading topics that Greene et al. used for lumbar disc herniation were adopted and used by adapting the sub-headings about hip fracture. In this method, the issues that should be mentioned about the illness are determined and 1 point is given for their mention, and if not mentioned, no point is given. As a result, with the points given, a total point is assigned for each site. The most important advantage of the method is that all pages are evaluated according to a standardized form and therefore it is possible to make an objective evaluation among the sites. The disadvantage of the method is its inability to differentiate between missing information and wrong information.

After performing a search about hip fracture, we analyzed the first 10 sites reached in the result lists. This is because although the user can reach a number of sites as a result of an online search, he takes a small number of these into account. The number of clicks on the first 10 sites listed on the first page after a search on any topic is very clearly more than the number of clicks on the next 10 sites.[13] (Table 2) As a result of the nature

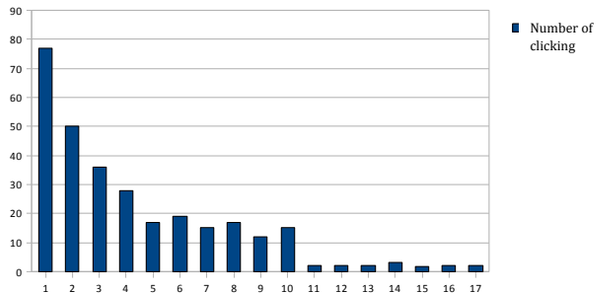


Table 2. Correlation between list rankings of search results in search engines and number of clicking

of the Internet, a user wanting to access information cannot wholly read or evaluate the content he has reached regarding the topic he is looking into. Therefore, we included the first 10 sites listed in the search engine for each search within the scope of our evaluation.

Although the first 30 sites most clicked on while searching information about hip fracture were examined, only 9 sites were in a position to be examined, which is quite interesting in terms of the difficulty in accessing information sources about the topic via the Internet. The problem of search engine optimization, which is a frequently faced problem on the Internet, is also encountered in the topic of health. While searching information online, a totally different site from what is actually being searched can be encountered, even if there is no relation. As many different sites use the words hip fracture as keywords in their content, they appeared in the first ranks in our search results. However, they did not provide information about the topic. Some sites in the first ranks contained publications of scientific research in popular journals with academic content. Those sites which probably contained the most correct and necessary information about the topic stood out with their content which was exclusively for surgeons with its highly medical terminology. We have seen that the sites which provide understandable information about the issue can be on very different levels regarding quality; however, in spite of this, the low-quality sites can show up in the first ranks. Those sites can be social networking sites, forums where patients share their experiences and commercial sites established to sell a certain product. That patients acquire information about health from those sources not only causes misinformation but also prejudices which are hard to be overcome by surgeons they consult. Patients do not remember even on which page they saw a piece of information while browsing online, but they develop prejudices about the topic in their subconscious.[13]

In our study, it has been found out that the majority of the sites which have contents in the Turkish Language and which are consulted most about the topic of 'hip fracture' as is revealed by search engines give missing and/or wrong information. This is a problem faced by many clinicians during their daily practices. Sometimes it can be quite difficult to overcome prejudices caused by deficient or wrong information acquired by patients and/or relatives on the Internet. And sometimes it is seen that because of biased information acquired from commercial web sites, patients carry out wrong procedures on their own. Reliability of information about health on the Internet should be approached as an issue of public health affecting large masses. As misinformation about health issues on the Internet can affect public health rather negatively, various accreditation systems have been developed in some countries (www.hon.ch, www.urac.org). In general, these systems depend on the accreditation of the sites in accordance with the demands of information providers. Therefore, the present systems cannot maintain an inspection wide enough to concern large public groups. The systems developed perform gradation according to certain criteria in the process of the sites' accreditation. These are the criteria which grade the content indirectly such as disclosure of the writer, advertisement content, and references to sources of information. As far as we know, a system carrying out direct content examination has not been developed so far.

We think that our study will be followed by similar studies and thus we will have more data about the reliability of information on websites prepared in Turkish about health. In accordance with these data, public awareness should be raised about reliability of information on the Internet. Besides, necessary steps

should be taken about the development of various applications or accreditation systems, which are few in number and which aim at increasing reliability of information, for Turkish websites, too.

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